

I. AMENDMENTS TO THE CLAIMS

Listed below are the changes made to the claims, in which the insertions are underlined and deletions are shown by strikethrough. The listing of claims below replaces all prior versions and listings of claims in the application. The listing of claims presents each claim with its respective status shown in parentheses.

Please amend the claims as follows:

1. (Currently Amended) A distributed file storage system ~~communicating with a plurality of intelligent storage devices, wherein the distributed file system is configured to store and manage data and metadata about files and directories stored on the distributed file system, wherein the data of at least one of the files or directories stored on the distributed file system span at least two of the intelligent storage devices~~ comprising:

a set of at least four storage modules in communication with each other;

a file stored on the distributed file system;

a first file portion of the file comprising a first set of file data; and

a second file portion of the file comprising a second set of file data, wherein the second set of file data is different from the first set of file data;

metadata related to the file;

error correction data related to the file comprising at least a first error correction data related to the first file portion;

a first program module stored in said distributed file storage system and in communication with the set of storage modules configured to:

dynamically select from the set of storage modules a first storage module on which to store the first file portion;

dynamically select from the set of storage modules a second storage module on which to store the second file portion, wherein the first storage module is different from the second storage module;

dynamically select from the set of storage modules a third storage module on which to store at least a portion of the metadata, wherein the third storage module is different from the first storage module and the second storage module;
and

dynamically select from the set of storage modules a fourth storage module on which to store the first error correction data, wherein the fourth storage module is different from the first storage module and the second storage module; wherein the dynamic selection is based on at least one of performance, available capacity, and throughput of the set of storage modules; and

a second program module stored in said distributed file storage system and in communication with the set of storage modules configured to dynamically update the metadata to indicate which of the set of storage modules on which the first file portion, the second file portion, and the first error correction data are stored.

2. **(Currently Amended)** The distributed file storage system of Claim 1, ~~further configured to provide different levels of replication and redundancy within the distributed file system, wherein the replication and redundancy information for a file or directory is stored with the file or directory's corresponding metadata~~ further comprising a third program module stored in said distributed file storage system and in communication with the set of storage modules configured to instruct the set of storage modules to store the first file portion on the first storage module, the second file portion on the second storage module, the at least a portion of the metadata on the third storage module, and the first error correction data on the fourth storage module.

3. **(Currently Amended)** The distributed file storage system of Claim 21, wherein the error correction data ~~redundancy information~~ includes parity information.

4. **(Currently Amended)** The distributed file storage system of Claim 3, wherein the parity information includes parity data blocks and location information indicating which of the set of storage units on which the location of the parity data blocks are stored, and wherein the metadata further indicates ~~stores information about the location information of the parity data blocks.~~

5. **(Currently Amended)** The distributed file storage system of Claim 1 wherein the error correction data includes, ~~further configured to change~~ redundancy data related to the parameters of a file or directory, and wherein the file or directory's corresponding metadata is updated to store further indicates ~~information about the location of the redundancy data.~~

6. **(Currently Amended)** The distributed file storage system of Claim 5, the first program module further configured to store a copy of the first file portion ~~file or directory data~~ in

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~~real-time on a fifth storage module in the set of storage modules throughout a subset of the plurality of intelligent storage devices and to store the location locations of the copied first file portion or directory data in the file or directory's corresponding metadata, wherein the fifth storage module is different from the first storage module and the third storage module.~~

7. (Currently Amended) The distributed file storage system of Claim 1, further comprising a third program module stored in said distributed file storage system and in communication with the set of storage modules configured to move the first file portion data in real-time from the first storage module to a fifth storage module in the set of storage modules, and the second program module is further configured to update the metadata to indicate wherein the location of the moved first file portion data is stored with the data's corresponding metadata.

8. (Currently Amended) The distributed file storage system of Claim 1, further comprising a third program module stored in said distributed file storage system and in communication with the set of storage modules, said third program module configured to replicate the first file portion data in real-time and to store the replicated first file portion on a fifth storage module in the set of storage modules, and the second program module is further configured to update the metadata to indicate wherein the location of the replicated first file portion data is stored with the data's corresponding metadata.

9. (Currently Amended) The distributed file storage system of Claim 8, the third program module further configured to replicate the first file portion data in response to a high volume of requests for the data.

10. (Currently Amended) The distributed file storage system of Claim 8, the third program module further configured to replicate the first file portion data in response to high utilization of the hardware which stores the data.

11. (Currently Amended) The distributed file storage system of Claim 18, further configured ~~configure~~ to handle more READ requests than WRITE requests.

12. (Currently Amended) The distributed file storage system of Claim 18, further configured to handle block transactions.

13. (Currently Amended) A virtual file system for storing data files among a plurality of modular storage units, the virtual file system comprising:

a plurality of storage units configured to:

dynamically select where to store blocks of data related to a file among at least two of the plurality of storage units, such dynamic selection based on at least one of performance, available capacity, and throughput of the plurality of storage units;

store the blocks of data among the plurality of storage units according to the dynamic selection;

receive a data file read request requesting the file;

retrieve location data information corresponding to the requested data file, wherein the location data information includes storage location information about the blocks of data that correspond to the requested data file, ~~wherein blocks that correspond to a single copy of the requested data file are distributed among two or more storage units;~~

retrieve locally stored blocks; and

request remotely stored blocks.

14. **(Currently Amended)** The virtual file system of Claim 13, wherein the storage units include a storage device and a processing module, wherein the locally stored blocks are data is stored on the storage device, and the processing module retrieves the locally stored blocks from the storage device.

15. **(Currently Amended)** The virtual file system of Claim 13, wherein the plurality of storage units are; further configured to ~~comprising a write module in communication with the switch component, wherein the write module is configured to receive a data file write request and to determine the storage location of a plurality of blocks that correspond to the data file write request.~~

16. **(Currently Amended)** The virtual file system of Claim ~~13~~ 15, wherein dynamically selecting includes tracking which of the at least two plurality of storage units on which ~~the write module is further configured to distribute the plurality of blocks of data are to be stored among at least two of the plurality of storage units.~~

17. **(Currently Amended)** The virtual file system of Claim ~~15~~ 16, wherein the data file write request includes mirror protection information.

18. **(Currently Amended)** The virtual file system of Claim ~~13~~ 17, wherein the plurality of storage units are ~~write module is further configured to~~ dynamically distribute

mirrored data that corresponds to at least one copy of the blocks of data ~~file write request~~ and ~~complies with the mirror protection information~~ among at least two of the plurality of storage units.

19. **(Currently Amended)** The virtual file system of Claim ~~15~~46, wherein the data file write request includes parity protection information.

20. **(Currently Amended)** The virtual file system of Claim ~~13~~ 49, wherein the plurality of storage units ~~write module~~ is further configured to dynamically distribute parity data that corresponds to the blocks of data ~~file write request~~ and ~~complies with the parity protection information~~ among at least two of the plurality of storage units.

21.-42. **(Cancelled)**

43. **(Currently Amended)** The distributed file system of Claim 1, wherein the a file has been stored on a number of ~~intelligent~~ storage modules ~~devices~~, wherein the number is determined specifically for the file, and wherein the number is equal to or greater than two.

44. **(Previously Presented)** The virtual file system of Claim 13, wherein the blocks include content data.

45. **(Previously Presented)** The virtual file system of Claim 13, wherein the blocks include metadata.

46. **(Currently Amended)** The virtual file system of Claim 13, wherein the number of storage units on which the blocks are stored has been determined specifically for the ~~data~~ file.

47. **(Currently Amended)** A method for storing a file among at least two of a plurality of storage modules, the method comprising:

receiving a request to store a file;

dynamically selecting from among the plurality of storage modules, a first storage module on which to store a first portion of the file;

dynamically selecting from among the plurality of storage modules, a second storage module on which to store a second portion of the file;

storing the a first portion of the file on the a first storage module;

storing the a second portion of the file on the a second storage module;

wherein the first portion is different from the second portion and wherein the first storage module is different from the second storage module; and

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storing address information about where the first portion and second portion were stored, whereby the file may be retrieved as a single file.

48. **(Previously Presented)** The method of Claim 47, wherein the address information is stored among at least two of the plurality of storage modules.

49. **(Currently Amended)** The method of Claim 47, further comprising:
dynamically selecting from among the plurality of storage modules, a third storage module on which to store a copy of the first portion of the file;

storing ~~the~~ a copy of the first portion of the file on ~~the~~ a third storage module;
dynamically selecting from among the plurality of storage modules, a fourth storage module on which to store a copy of the second portion of the file; and

storing ~~the~~ a copy of the second portion of the file on ~~the~~ a fourth storage module, wherein the first storage module, the second storage module, third storage module, is different from and the fourth storage module are different.

50. **(Previously Presented)** The method of Claim 49 further comprising storing copy address information about where the copy of the first portion and the copy of the second portion were stored.

51. **(Previously Presented)** The method of Claim 50, wherein the copy address information is stored among at least two of the plurality of storage modules.

52. **(Previously Presented)** The method of Claim 47 further comprising generating error correction data for the file.

53. **(Currently Amended)** The method of Claim 52 further comprising:
dynamically selecting from among the plurality of storage modules, a third storage module on which to store a first portion of the error correction data; and

storing ~~the~~ a first portion of the error correction data on the third storage module ~~among at least two of the plurality storage modules.~~

54. **(Currently Amended)** A distributed file storage system comprising:
a plurality of storage modules;
a file, wherein the file is divided into portions;
a first module stored on the distributed file storage system configured to dynamically select from among the plurality of storage modules where the portions are to

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be stored such that ~~and~~ the portions are stored among at least two of the plurality of storage modules; and

location metadata stored in the distributed file storage system related to the file, wherein the location metadata is created based on the selection of the first module and identifies where the portions are stored.

55. **(Currently Amended)** The distributed file storage system of Claim 54 wherein at least a first portion of the file is stored on a first one of the plurality of storage modules and at least a second portion of the file is stored on a second one of the plurality of storage modules, wherein the first one of the plurality of storage modules is different from the second one of the plurality of storage modules, and the first portion of the file is different from the second portion of the file.

56. **(Currently Amended)** The distributed file storage system of Claim 54, wherein the first module is further configured to dynamically select from among the plurality of storage modules where the location metadata is to be stored such that the location metadata is stored among at least two of the plurality of storage modules ~~units~~.

57. **(Currently Amended)** The distributed file storage system of Claim 54, ~~wherein the metadata further includes~~ comprising error correction data.

58. **(Currently Amended)** The distributed file storage system of Claim 54 further comprising a copy of the file, wherein the first module is further configured to dynamically select from among the plurality of storage modules where the copy of the file is to be stored, such that the copy of the file is stored among at least two of the plurality of storage modules ~~units~~.

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II. SUMMARY OF INTERVIEW

The Applicants would like to thank Examiner Chen and Primary Examiner Le for the interview extended to the Applicants' counsel on November 4, 2004. During the interview, the Applicants' counsel provided a general demonstration of features of the system. In addition, Applicants' counsel clarified patentably distinguishing features of the invention and discussed Claims 1 and 13. In light of the interview and the Applicants' response set forth herein, the Applicants respectfully request reconsideration of the pending claims.